

CLAIMS:

1. An interactive display device comprising:
 - a) a display;
 - 5 b) a non-volatile memory having interaction data and image content depicting a character stored therein;
 - c) a communication circuit adapted to transmit interaction data to another interactive display device and to receive interaction data from said other interactive display device; and
 - 10 d) a display controller adapted to determine modified interaction data based at least in part upon received interaction data, to determine a character image based at least in part upon the modified interaction data and the stored image content and to cause the display to present the character image;
 - e) wherein the display controller is further adapted to store the 15 modified interaction data in the non-volatile memory.
2. The interactive display device of claim 1, wherein the image content depicting the character includes at least one group of image sequences.
- 20 3. The interactive display device of claim 1, wherein the image content depicting the character includes image content depicting character interactions.
4. The interactive display device of claim 1, wherein the 25 communication circuit comprises a transducer for exchanging data using a wireless communication path.
5. The interactive display device of claim 1, wherein the communication circuit is adapted for communication by way of a physical 30 communication path.

6. The interactive display device of claim 1, wherein the communication circuit is adapted to use a removable memory to exchange data with the other interactive display.

5 7. The interactive display device of claim 1, further comprising a user input system and wherein interaction data is entered using the user input system.

10 8. The interactive display device of claim 1, wherein the communication circuit is adapted to communicate with said other display device using network interaction.

15 9. The interactive display device of claim 1, wherein the interaction data includes at least one of character identification, character attributes, and character status.

10. The interactive display device of claim 1, wherein the modified interaction data includes at least one of modified character identification, modified character attributes, and modified character status.

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11. The interactive display device of claim 1, further comprising a user input system having a transducer for converting a user input action into a signal that can be used by the display controller to determine personalization information.

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12. The interactive display device of claim 11, wherein at least one of the character, images, and/or character attributes are personalized in accordance with the personalization data.

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13. The interactive display device of claim 12, wherein the display controller is further adapted to cause the display to present questions relevant to a character and wherein answers to the questions are used to determine personalization data.

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14. The interactive display device of claim 11, wherein the personalization data is used as part of the interaction data.

10 15. The interactive display device of claim 1, wherein the display is a flexible display.

16. The interactive display device of claim 1, wherein the display is the approximate size of a playing card.

15 17. The interactive display device of claim 1, wherein the display is a flat-panel display.

20 18. The interactive display device of claim 1, wherein any of the non-volatile memory, the display controller, and the communication circuit are mounted on the display.

19. The interactive display device of claim 1, wherein the display is an OLED display.

25 20. The interactive display device of claim 1, wherein the image content is at least one of a motion image sequence, a still image, a group of still images and a stream of image information.

30 21. The interactive display device of claim 1, further comprising an audio system to generate audio signals based upon audio content stored in the non-volatile memory and display controller.

22. The interactive display device of claim 1, wherein the interaction data further comprises audio content and wherein the display further comprises an audio system adapted to generate sounds based upon the audio content received by the display device.

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23. The interactive display device of claim 1, wherein the display is a passive-matrix display.

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24. The interactive display device of claim 1, wherein the display is a reflective display.

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25. The interactive display device of claim 1, wherein the display uses bi-stable cholesteric materials to form images.

26. The interactive display device of claim 1, wherein the display is a color display.

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27. The interactive display device of claim 1, wherein the display controller is a non-programmable state machine.

28. The interactive display device of claim 1, wherein the display controller comprises a non-programmable logic circuit.

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29. An interactive display system comprising:
a plurality of interactive displays devices each interactive display device having at least:
a display capable of forming images and a non-volatile memory having character data stored therein;
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at least one source of character images;
at least one source of interaction data;

a communication circuit adapted to exchange interaction data between the plurality of interactive display devices; and

a display controller adapted to determine modified interaction data for each of the plurality of display devices, to select at least one of the character images in the source of character images for presentation on each interactive display device based upon the modified interaction data determined for that interactive display device and to cause the character image selected for each interactive display device to be presented on the display associated with that interactive display device,

10 wherein the display controller further causes the modified interaction data to be stored in the non-volatile memory.

30. The display system of claim 29, wherein the communication circuit and display controller are located in an interface module that is separate from the display devices.

15 31. The display system of claim 30, wherein the display is a bi-stable display and wherein the display controller comprises a display driver for causing an image to be formed on the bi-stable display.

20 32. The display system of claim 29, wherein each display device has interaction data stored therein that associates the interactive display device with character images..

25 33. The interactive display system of claim 32, wherein the character images, and character interaction data are transmitted via a communication through a computer network and stored within the interactive display devices.

34. The interactive display system of claim 33, wherein the character images and interaction data are stored within the interactive display devices at manufacture and the interactive display devices are vended in a vending machine.

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35. The interactive display system of claim 31, wherein the character associated with each interactive display device is selected by a purchaser.

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36. The interactive display system of claim 29, a kiosk vends interactive display devices having different characters selected by a purchaser.

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37. The interactive display system of claim 36, and wherein the kiosk vends interactive display devices with particular characters having different prices.

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38. The interactive display system of claim 36, wherein the kiosk spends interactive display devices with characters having at least one of character image, character attributes, and personalization data determined at least in part based upon a price paid for the interactive display devices.

39. The interactive display system of claim 29, wherein the interactive display devices take the form of tradeable cards.

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40. A method for operating an interactive display device having interaction data stored therein, the method comprising the steps of:

detecting another interactive display device having interaction data stored therein;

receiving interaction data from the other interactive display device;
determining modified interaction data based at least in part upon the interaction data received from the other interactive display device;

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determining a character image based at least in part upon the modified interaction data; and
presenting the character image using the display device, and storing the modified interaction data in the interactive display device.

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41. The method of claim 40, further comprising the step of transmitting the interaction data to the other display device.

42. The method of claim 40, wherein the interaction data
10 comprises a status score and the step of generating modified interaction data comprises adjusting the status score, and further comprising the step of prohibiting further interaction between the interactive display device and other interactive display devices, when the status score falls below a threshold.

15 43. The method of claim 42, further comprising the step of generating a reset signal that adjust the status score above the threshold so as to remove the prohibition on further interaction between the interactive display device another interactive display device.